Delta Operations for Salmonids and Sturgeon (DOSS) Group
Conference call: 5/14/13 at 9:00 a.m.

Objective: Provide advice to the Water Operations Management Team (WOMT) and National Marine Fisheries Service (NMFS) on measures to reduce adverse effects from Delta operations of the Central Valley Project and the State Water Project on salmonids and green sturgeon. DOSS will work with other technical teams. DOSS notes and advice can be found at: http://www.swr.noaa.gov/ocap/doss.htm.

DWR: Mike Ford, Andy Chu, Edmund Yu, Tracy Pettit
FWS: Craig Anderson, Roger Guinee, Leigh Bartoo
NMFS: Barbara Rocco, Jeff Stuart, Barb Byrne
Reclamation: Josh Israel, Russ Yaworsky
DFW: Bob Fujimura
SWRCB: Scott Ligare
EPA, USGS: not present

Agenda
1. Fish monitoring
2. Current operations
3. RPA implementation update
4. DOSS Advice?

Fish Monitoring: The following table presents fish monitoring data. Unless otherwise noted, reported sizes are fork length. See also: http://www.water.ca.gov/swp/operationscontrol/calfed/calfedmonitoring.cfm.

Location	Chipps Is. Midwater Trawl	Sacramento Trawls	Mossdale Kodiak Trawl	Glenn-Colusa ID RST	Tisdale RST	Beach Seines
Sample Date	5/6, 8, 10	5/7, 5/9	5/7–5/11	5/11–5/12	5/7–5/10, 5/13	5/6–5/9
Total Catch	**339**	**486**	**42**	**311**	**51**	**34**
FR	236	377	41	278	40	16
WR						
SR	41	4			1	1
LFR						
Ad-Clipped Chinook	58	105		33	10 (no race assigned)	2
DS						2 (88 mm)
Splittail	3					13 (34–132 mm)
Longfin						
SH (ad-clip)	1 (242 mm)					
SH (wild)			1 (180 mm)			
W. Temp. (avg. °F)	66.0	66.2			62.0	66.2
Flows (avg. cfs)					7,818	

Turbidity (avg. NTU)	52.8	10.1			10.4	27.3
WR/LFR Avg. CPUE						
FR/SR Avg. CPUE					0.253	

Key: FR = Fall run; LFR = Late-fall run; SR = Spring run; WR = Winter run; SH = Steelhead; DS = Delta smelt; LFS = longfin smelt; CPUE = catch per unit of effort; ACT = acoustic tag; N/A = not available

Glenn-Colusa Irrigation District (GCID): Byrne (NMFS) will check with Colin Purdy (DFW) about any green sturgeon see or caught, and will ask that DOSS receive regular updates on sturgeon (especially green sturgeon) from GCID.

Mossdale: DFW released 5,000 Chinook marked with purple on the upper caudal fin last Friday (5/10) at the Mossdale boat ramp for an efficiency study with the Mossdale trawl.

Releases/Monitoring: DFW will release 100,000 (100% marked [ad-clipped] and coded wire tagged [CWT'd]) fall-run Chinook at Broderick Boat Launch on the Sacramento River as part of a barging experiment on 5/14 at 10:30 a.m. This in-river release will be a paired release to 100,000 fall-run that will be barged out to the San Francisco Bay and released.

Fish Salvage: Geir Aasen (DFW) provided the fish salvage report covering 5/6/13 through 5/12/13 and emailed it to DOSS participants. This report is posted at ftp://ftp.delta.dfg.ca.gov/salvage and you can locate the table under "DOSS salvage tables" (also try http://www.dfg.ca.gov/delta/apps/salvage/Default.aspx and click on "salvage FTP site").

DFW (Fujimura) report for 5/6–5/12/13

The number of salvaged steelhead markedly decreased last week. Sixteen non-ad-clipped steelhead were salvaged during the reporting period. The estimated daily loss densities ranged from 1.23 to 16.60 fish/TAF and exceeded the second-stage loss criterion (12 fish/TAF multiplied by volume exported) on 5/6. The season total of salvaged non-ad-clipped steelhead is 717. No ad-clipped steelhead were salvaged during the reporting period.

No non-ad-clipped older juvenile Chinook salmon was salvaged last week. The salvage numbers of non-ad-clipped juvenile Chinook for both spring- and fall-run-sized fish also decreased markedly. There were 473 non-ad-clipped juvenile Chinook salvaged during the reporting period, of which 48 were spring-run sized and 425 were fall-run sized. No ad-clipped Chinook were salvaged last week.

No sturgeon were salvaged during the reporting period.

DFW (Fujimura) report on preliminary salvage estimates for 5/13/13

At the CVP, 44 fall-run-sized Chinook and 4 sutured *O. mykiss* (no information was available on absence/presence of adipose fin) were salvaged. At the SWP, 8 spring-run-sized non-ad-clipped, 86 fall-run-sized non-ad-clipped, and 8 non-ad-clipped *O. mykiss* were salvaged. There is no estimated loss because the final numbers are not yet available; however, based on the preliminary estimate, the first-stage criterion for steelhead might have been triggered. We will not know for sure until the final numbers are available. It was noted that sutured steelhead are included when estimating salvage; therefore, those that are sutured and non-ad-clipped are included in the loss estimates used to determine whether a steelhead loss trigger was exceeded. Some steelhead from the Stanislaus River might be coming through that are the releases from other studies.

6-Year Study: Several DOSS participants attended last week's tag-and-release activities for the 6-year study. There were 480 steelhead tagged and released.

RPA Action IV.2.3: Effective 5/10/13 (last Friday), the action response under Action IV.2.3 (OMR Flow Management Action) to operate to an OMR limit of no more negative than -2,500 cfs was relaxed to an OMR limit of no more negative than -5,000 cfs. This action response did not control export operations while in effect. The preliminary steelhead loss estimate for 5/13/13 indicates that the first-stage criterion based on steelhead loss might have been triggered. If exceedance of the first-stage loss trigger is confirmed later today, the action response under Action IV.2.3 is to operate to an OMR limit of no more negative than -3,500 cfs for at least 5 days.

Hatchery Coded-Wire-Tag Results (as of 5/13/13, see table below): No ad-clipped Chinook were salvaged at the facilities; there were no changes to the loss table since last week.

CONFIRMED HATCHERY (ADIPOSE FIN CLIPPED) CHINOOK SALMON LOSS AT THE SWP & CVP DELTA FISH FACILITIES, 2012/2013

Release Date	CWT Race	Hatchery	Release Site	Release Type	Confirmed Loss	Number Released[1]	Total Entering Delta	% Loss of Number Released[2]	% Loss of Total Entering Delta[3]	First Concern Level	Second Concern Level	Date of First Loss[4]	Date of Last Loss[4]
11/0/2012	F	Mokelumne River Hatchery	Mokelumne River	**	599.46	100,033	n/a	0.599	n/a	n/a	n/a	12/5/2012	4/0/2013
11/29/2012	LF	Coleman NFH	Battle Creek	Production	4100.48	805,842	n/a	0.509	n/a	n/a	n/a	12/9/2012	4/21/2013
12/18/2012	LF	Coleman NFH	Battle Creek	Spring Surrogate	74.95	72,974	n/a	0.103	n/a	0.5%	1.0%	12/31/2012	3/23/2013
1/8/2013	LF	Coleman NFH	Battle Creek	Spring Surrogate	138.79	79,005	n/a	0.176	n/a	0.5%	1.0%	1/20/2013	3/27/2013
1/25/2013	LF	Coleman NFH	Battle Creek	Spring Surrogate	24.40	85,600	n/a	0.029	n/a	0.5%	1.0%	2/3/2013	3/31/2013
2/7/2013	W	Livingston Stone NFH	Caldwell Park	Production	8.59	182,662	96,525	0.005	0.009	0.5%	1.0%	3/25/2013	3/25/2013
4/9 to 4/18/2013	S	Feather River Hatchery	Boyd's Pump	**	4.33	1,034,101	n/a	0.0004	n/a	n/a	n/a	4/30/2013	5/3/2013
4/10 to 4/11/2013	F	Coleman NFH	Battle Creek	Production	2.33	1,583,909	n/a	0.0001	n/a	n/a	n/a	5/2/2013	5/4/2013
4/17 to 4/18/2013	F	Mokelumne River Hatchery	Sherman Island Rd	**	0.00	112,447	n/a	0.000	n/a	n/a	n/a	5/4/2013	5/4/2013

UNCONFIRMED HATCHERY (ADIPOSE FIN CLIPPED) CHINOOK SALMON LOSS AT THE SWP & CVP DELTA FISH FACILITIES, 2012/2013

Facility	Unknown CWT Loss[5]	Unread CWT Loss[6]	Unknown Hatchery Loss[7]	Acoustic Tag Loss[8]	Number of Unassigned CWTs[9]
SWP	53.58	0.00	0.00	17.93	1
CVP	5.20	0.00	0.00	0.00	0
TOTAL	58.78	0.00	0.00	17.93	1

SWP and CVP adipose fin clipped Chinook lost from 10/1/2012 through 5/12/2013.
[1]Number released with the adipose fin clipped and a coded-wire tag (CWT).
[2]% Loss of Number Released = (Confirmed Loss/Number Released)*100.
[3]% Loss of Total Entering Delta= (Confirmed Loss/Total Entering Delta)*100.
[4]Date of first and last loss accounts for all CWT loss even those from special studies where salvage and loss=0.
[5]Adipose fin clipped Chinook was observed during fish count, but tag code could not be determined (e.g., damaged tag, lost tag, no tag, or Chinook accidentally released).
[6]Adipose fin clipped Chinook was collected during fish count and has not been processed yet.
[7]CWT has been read, but hatchery release information not yet available.
[8]Adipose fin clipped Chinook released due to presence of sutures.
[9]CWT cannot currently be assigned to a salvage record with certainty since the CWT was lost and then found. CWT may be assigned to a salvage record if new information is available.
** Information not yet available.

DWR-DES Revised 5/13/2013
Preliminary data from DFW, DWR, FWS, and Reclamation; subject to revision.

Operations (5/14/13)

SWP		CVP	
Exports (cfs)			
Clifton Court Forebay	1,000*	Jones Pumping Plant	1,000*
Reservoir Releases (cfs)			
Feather - Oroville	3,000	American - Nimbus	1,000
		Sacramento - Keswick	12,000
		Stanislaus - Goodwin	800 (will reduce to 400 –500 by 5/17)
Reservoir Storage (in TAF, % of capacity)			
San Luis (SWP)	377	San Luis (CVP)	624 (65)
Oroville	2,947	Shasta	3,619
New Melones		Folsom	707

Delta Operations			
DCC	Closed	Sacramento River at Freeport (cfs)	11,245
Outflow Index (cfs)	11,000	San Joaquin River (cfs) at Vernalis	3,376 (dropped rapidly with Goodwin reductions)
Total Delta Inflow (cfs)	15,651	OMR (daily) (cfs)	
Water Temperature (°F)		OMR 5-day avg (cfs)	-713
X2 (km)	81(upstream of Collinsville)	OMR 14-day avg (cfs)	-979
E/I (%)	11.5 (3-d avg)		

*Combined exports are expected to drop to 1,500 cfs beginning 5/23.

Water Quality: The extra releases are provided to help meet the 14-day average salinity standard (EC ≤ 0.45 mS/cm) at Emmaton; on a 5-day average, the standard is being met. Jersey Point is close to but has not exceeded the EC standard of 0.35 mS/cm. The Emmaton and Jersey Point water quality standards from D-1641 are controlling operations. Beginning 5/16 or 5/17, Vernalis flow is anticipated to be in the 1,500- to 2,000-cfs range and the operators predict that the I:E ratio in the NMFS BiOp will begin to control operations.

Water Temperature: Current water temperatures are as follows:
–Verona = 73°F
–Vernalis = 59–61°F (mean daily over past few days)
–Mossdale = 65°F as of 5/13
–NMFS noted that Action IV.2.3 (OMR flow management) is in effect until 6/15, or until average daily water temperature at Mossdale is greater than 72°F for 7 consecutive days, whichever is earlier.

Delta Status: There will be a meeting on 6/4 to discuss how "Delta status" (*e.g.*, balanced, excess, *etc*., is determined). Byrne will send out the information to DOSS as an FYI in case others would like to participate.

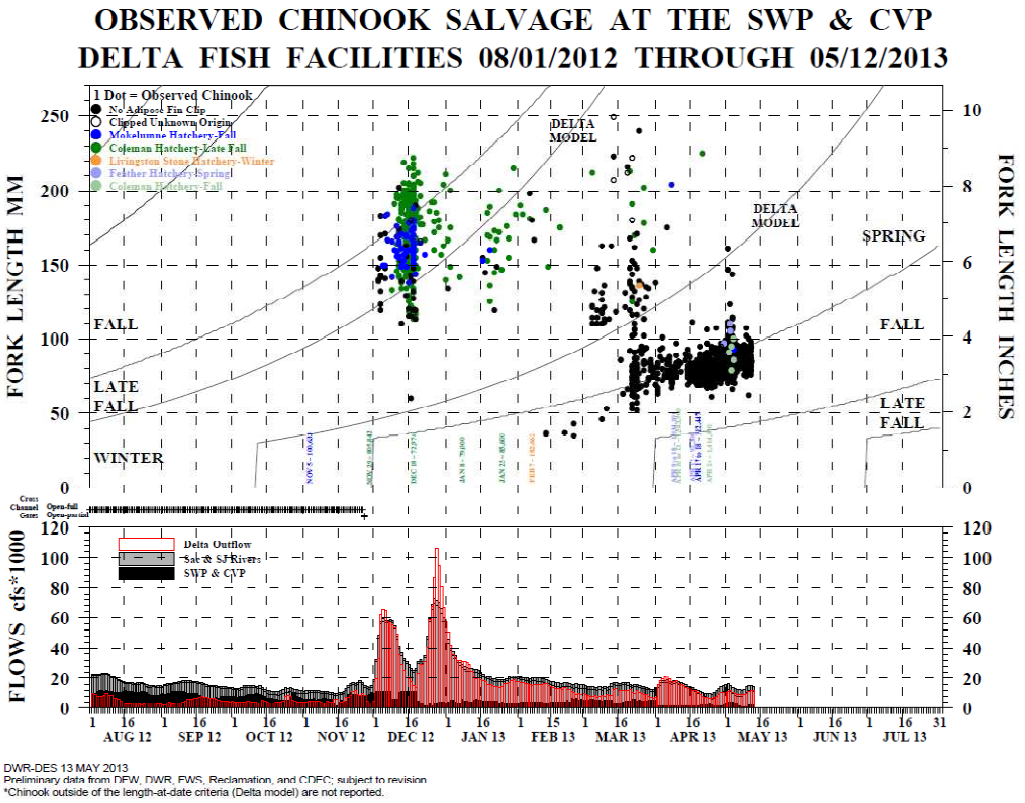
Smelt Working Group (SWG): Current operations are adequately protective for both delta and longfin smelt. The total take for juvenile delta smelt is 402, or 17% of the incidental take limit for water year 2013. Survey data indicate that most of the population is downstream of central and southern Delta, which is outside of the influence of the export facilities.

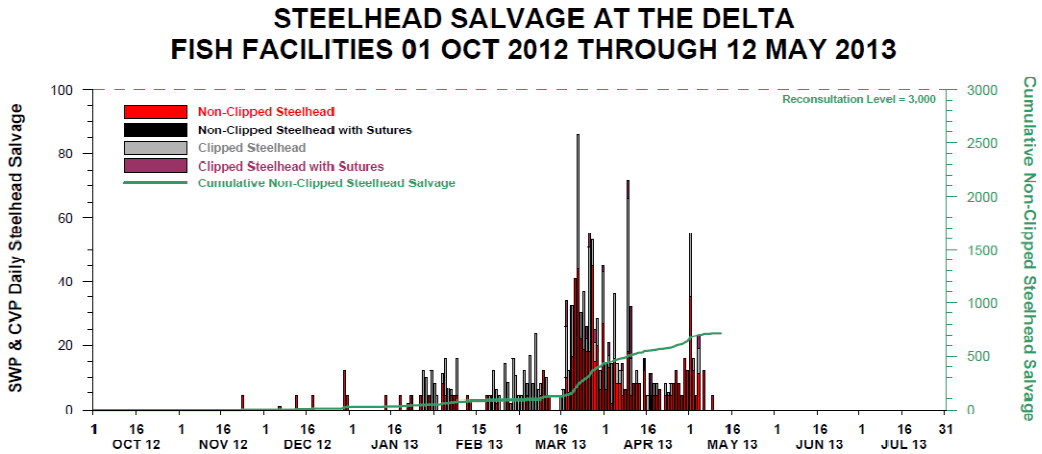
DOSS Annual Report: The table of contents (TOC) for this year's annual report will be distributed to DOSS before the next meeting. After a DOSS review and any revisions, the TOC will be provided to the Implementation Management Team for its review.

DOSS Advice to WOMT and NMFS: None.

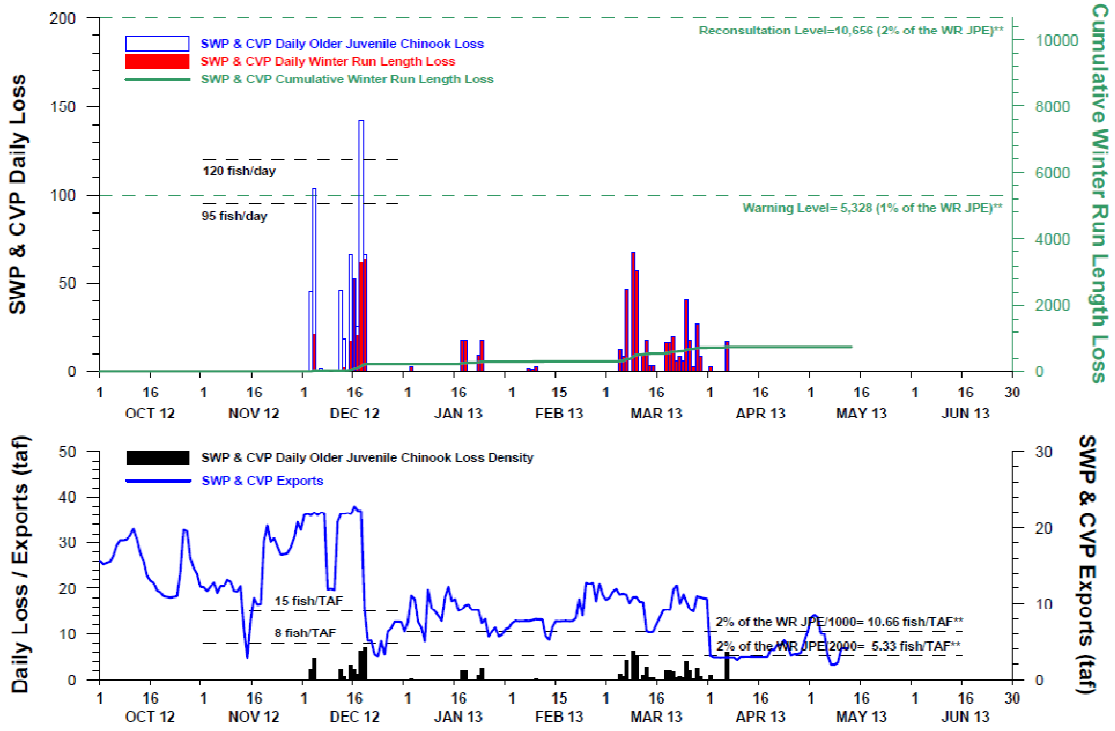
Next Meeting: The next DOSS conference call is scheduled for 5/21/13, at 9:00 a.m.

Below are graphs provided by DWR for Chinook salmon and steelhead salvaged or lost at the Delta fish facilities and observed in the Sacramento and San Joaquin rivers. For additional graphs, please visit the DWR website at: http://www.water.ca.gov/swp/operationscontrol/calfed/calfedmonitoring.cfm.



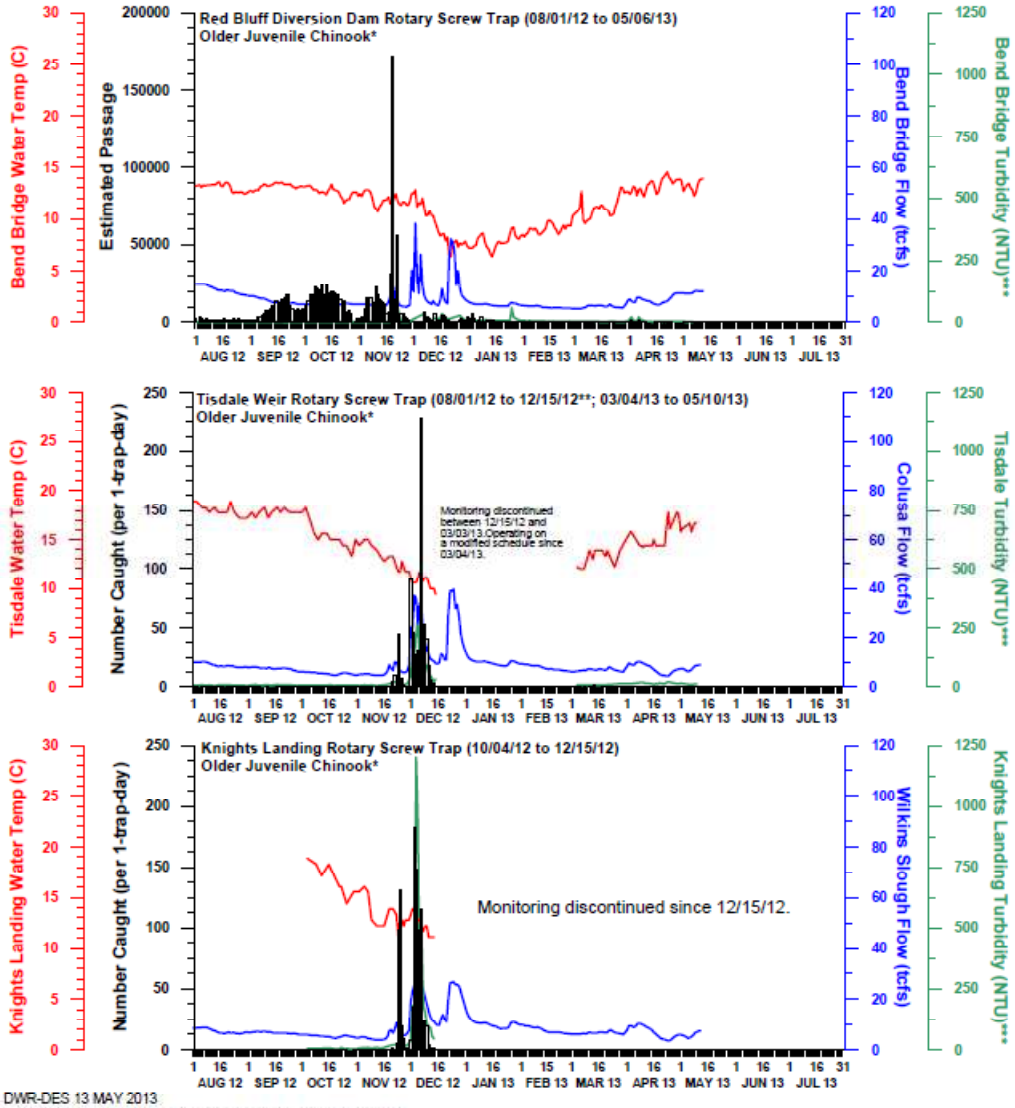


NON-CLIPPED WINTER RUN & OLDER JUVENILE CHINOOK LOSS AT THE DELTA FISH FACILITIES 01 OCT 2012 THROUGH 12 MAY 2013



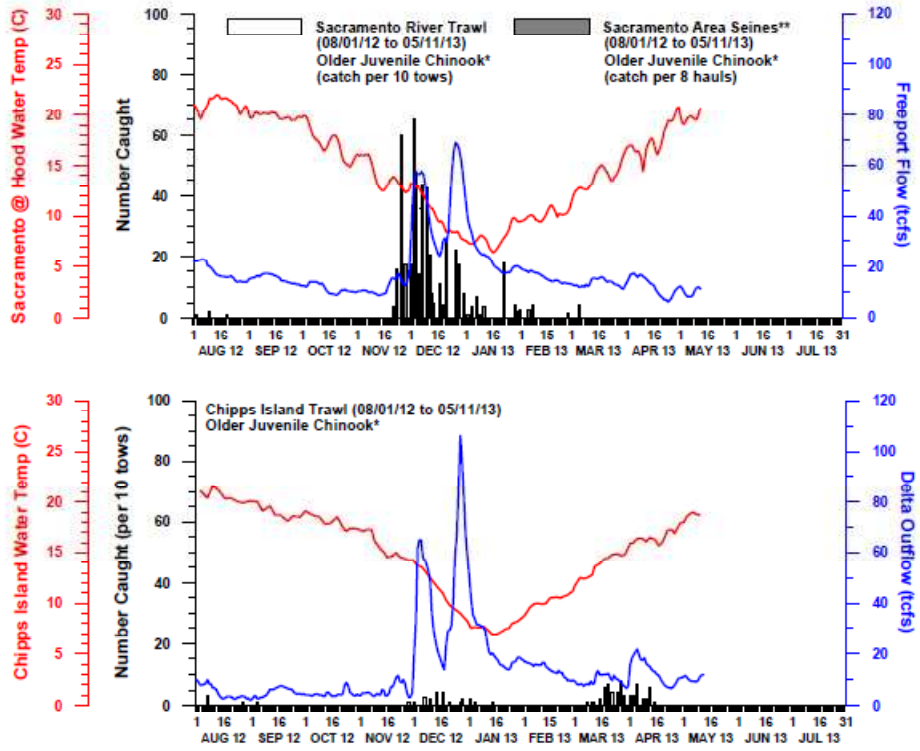
DWR-DES 13 MAY 2013
Preliminary data from DFW; subject to revision.
*Older juvenile Chinook defined as all Chinook above the minimum winter run length-at-date criteria and below the maximum size included in the length-at-date criteria (Delta model).
**Based on the final juvenile production estimate (JPE), which comes out to be about 532,800 non-clipped winter run (WR) Chinook entering the Delta during water year 2013.

NUMBER OF UNMARKED OLDER JUVENILE CHINOOK MEASURED IN THE SACRAMENTO RIVER



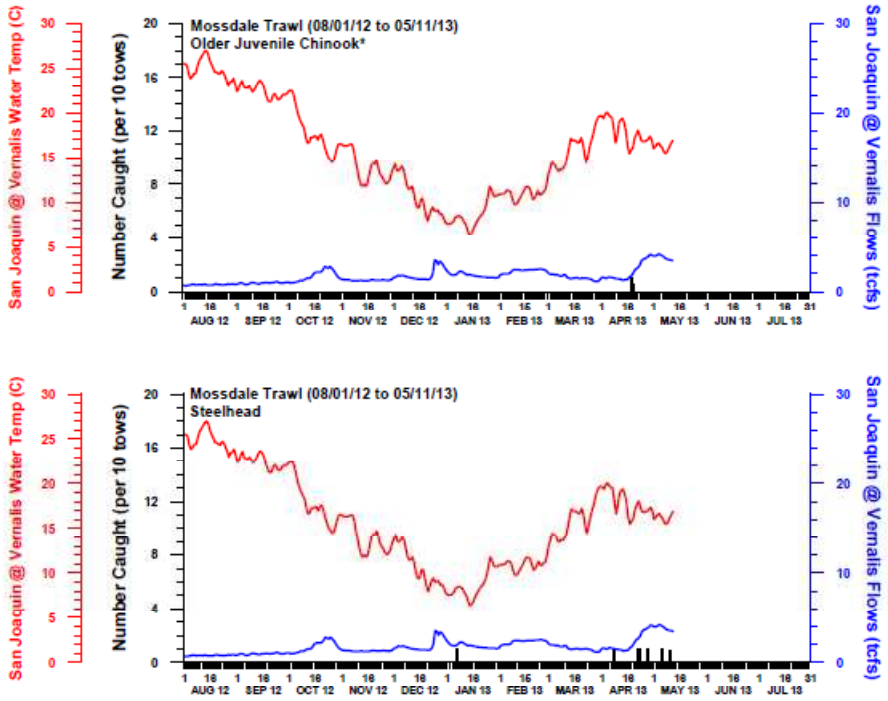
DWR-DES 13 MAY 2013
Preliminary data from DFW, FWS, and CDEC; subject to revision.
*Older juvenile Chinook defined as all Chinook above the minimum winter run length-at-date criteria and below the maximum size included in the length-at-date criteria (Frank Fisher model).
** Tisdale Weir: One older juvenile caught on 9/14 and 43 older juveniles caught on 11/25. However, CPUE was not calculated due to problems with the cone clickers. As a result, data are not presented on the graph.
***Turbidity is a discrete measurement and is not measured continuously. Therefore, data are interpolated on days when turbidity was not measured.

NUMBER OF UNMARKED OLDER JUVENILE CHINOOK MEASURED IN THE LOWER SACRAMENTO RIVER & CHIPPS ISLAND



DWR-DES 13 MAY 2013
Preliminary data from FWS and CDEC; subject to revision.
*Older juvenile Chinook defined as all Chinook above the minimum winter run length-at-date criteria and below the maximum size included in the length-at-date criteria (Frank Fisher model).
**Sacramento area seine route consists of the following seine sites: Verona, Elkhorn, Sand Cove, Discovery Park, American River, Miller Park, Sherwood Harbor, and Garcia Bend. Bars are stacked if Chinook caught from the trawl and seines are from the same day.

NUMBER OF UNMARKED OLDER JUVENILE CHINOOK AND UNMARKED STEELHEAD MEASURED IN THE SAN JOAQUIN RIVER



DWR-DES 13 MAY 2013
Preliminary data from DFW, FWS, and CDEC; subject to revision.
*Older juvenile Chinook defined as all Chinook above the minimum winter run length-at-date criteria and below the maximum size included in the length-at-date criteria (Frank Fisher model).